FROM GLOBAL TO LOCAL: TECHNOLOGY JOINS THE BATTLE TO ELIMINATE GRAFFITI VANDALISM

Rick Draper, Managing Director and Principal Advisor
Amtac Professional Services Pty Ltd

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In a partnership that spans half the globe, the Graffiti Response and Information Team (“GRiT”), based in Calgary, Canada, has joined forces with Brisbane based crime prevention and security consultants, Amtac Professional Services Pty Ltd. GRiT is a unique program built on volunteers and is having a direct impact on the reduction of graffiti vandalism in communities across western Canada.

There are several aspects of the GRiT program that make it unique. Of course there are volunteers doing paint-outs, and community members assisting with identifying problem areas; but GRiT goes much further. GRiT employs a web enabled intelligence database developed and hosted by Amtac in Brisbane, to support several Canadian police and municipal agencies in the direct fight against these crimes. Highly trained volunteers (some ex-law enforcement) not only gather valuable information for the database by photographing graffiti and including general observations, but they also participate in surveillance and under-cover operations to identify the offenders to add weight to prosecution by the police. To date, GRiT has directly participated in the apprehension of twenty graffiti vandals across Alberta, and is currently tracking thirty-seven offenders from around the world, including a writer who moved from Calgary to London.

This paper discusses the GRiT program and the use of technology by volunteers and police in the battle to address graffiti vandalism.

Introduction

While graffiti is regarded by some as a means of social interaction\(^1\), the reality for many public and private sector organisations is that graffiti vandalism is a problem that inflicts costs of millions of dollars annually\(^2\). The occurrence and density of graffiti would appear to have definite cultural links, with many Asian countries experiencing low levels of this form of vandalism. For example, Hong Kong Police report an increase in graffiti that seems to coincide with expatriate youths coming home for holidays, after being at boarding school in England.

Calgary, in the province of Alberta, Canada, has been grappling with its graffiti problem for many years. The City of Calgary, along with the Calgary Police Service, has initiated several programs with the aim of reducing the impact of graffiti and raising community awareness. These have included supply of free paint, an “adopt a fence” program, promotion of graffiti minimisation strategies, and a youth oriented “Graffiti Awareness &Abatement Program”, known as “GAAP”. However, as with the Australian experience, much of the graffiti in Calgary is unreported and there are limited facilities for analysis of that data which does exist.

The Graffiti Response and Information Team (“GRiT”) was founded in the community of Queensland in Calgary, by the Executive Director of the International CPTED Association, Barry Davidson. GRiT volunteers seek to educate communities and businesses in strategies to reduce the cost and incidence of graffiti vandalism, assist with establishing ‘clean up crews’ to ensure that graffiti is removed in a timely manner, and promote the reporting of graffiti so that details can be subjected to analysis. A second unique aspect of the work of the GRiT volunteers is to infiltrate the graffiti subculture and supply information to law enforcement on the identities of graffiti vandals, and locations of upcoming ‘tagging events’. Highly trained and appropriately resourced GRiT volunteers also conduct surveillance operations in areas heavily affected by graffiti, and work closely with law enforcement agencies to bring vandals to justice.


On the other side of the world, coincidentally in Queensland, Australia, security risk management consultants, Amtac Professional Services Pty Ltd. (“Amtac”) have been assisting schools in South Australia and New South Wales with making security incident reports via the Internet. The system, first introduced into South Australian Schools in the year 2000, was rolled out to all schools in New South Wales during 2002. Using an encrypted Internet connection similar to that used for electronic banking, incident reports are entered into a web enabled secure database. The report details can then be accessed by a number of authorised stakeholders, using a hierarchy of permissions, to support the required actions. Typically local police will access reports and may assign crime report numbers directly into the database, while maintenance contractors are automatically notified by email to initiate any works that may be associated with the report. Through the International CPTED Association link between GRiT founder, Barry Davidson, and Amtac’s Managing Director, Rick Draper, the idea of using this technology to support GRiT’s efforts emerged. Based loosely on the systems already deployed for schools, the GRiT graffiti database incorporates additional features to assist with the tracking of offender and of fence profiles, volunteer hours, and automated communication based on predetermined criteria.

**Graffiti Response and Information Team**

GRiT volunteers initially concentrated their efforts in the Calgary neighborhoods of Queensland, Deer Run / Deer Ridge, Douglasdale, and Inglewood. However, as interest grew and the work of GRiT received media attention, the program has been expanding and is now supporting communities across Alberta. One of the key objectives for the program is to have GRiT volunteers in place to work with communities to remove visible graffiti within seventy-two hours of it being reported. This coupled with a campaign to educate communities about the tools and techniques available to reduce this graffiti vandalism has seen some communities reach what GRiT describe as a ‘99% graffiti free’ status.

The more controversial aspect of the GRiT program involves highly trained volunteers working under cover and conducting coordinated surveillance operations. In recognition of the results achieved with only limited resources, Canada Post donated a van to GRiT to use as a surveillance vehicle and for transporting supplies. Within legal limitations, the van has been fitted out with sophisticated surveillance and communication equipment that would be the envy of many agencies. GRiT volunteers have participated in the apprehension of twenty graffiti vandals across Alberta, and are currently tracking thirty-seven offenders from around the world, including a writer who has moved from Calgary to London.

As an independent volunteer organization, supported by donations and private sponsorships, GRiT is not encumbered by the bureaucracy that surrounds police and government agencies. This has allowed GRiT to act effectively as a communication conduit between agencies and departments in western Canada, such as the Calgary Police Service, Canadian Pacific Police, City of Calgary Graffiti Abatement Office, and the Edmonton Police Service. There will undoubtedly be some concerns about the potential for vigilante type actions, and GRiT is committed to ensuring that it carefully screens volunteers for these specialist roles and only highly trained personnel are deployed. Existing volunteers working in undercover and surveillance operations have law enforcement or appropriate private sector backgrounds, and are fully briefed to ensure that their activities are lawful and do not represent any danger to themselves or others.

The three key members of GRiT are:-

Ken Hanson, Operations/Intelligence Supervisor, is a Corrections Officer and member of the Alberta Solicitors General’s tactical response Team. Ken Hanson has over fifteen years security and law enforcement experience. Dawn MacElligot, Intelligence Coordinator / Media Liaison, has many years of experience as a Calgary Police Service volunteer and brings an excellent
communications and business background to GRiT. Paul O’Gorman, Administration/Fund Raising Supervisor, is a business consultant in the oil industry and a founding member of GRiT. Paul O’Gorman is a committed community worker, scout leader, and active GRiT volunteer. He has been involved in numerous paint-over and community clean up projects.

The Technology

Using forms on web pages to gather data has been a relatively common practice since the inception of the Internet. However, there are still many computer literacy, accessibility, and confidence issues that need to be resolved before this medium can be regarded as truly effective. Notwithstanding this point, as people have become more familiar with the technology, there has been a greater acceptance of the Internet and the exceptional capacity it has to facilitate communication.

Conservative estimates suggest that there are over 605 million users of the Internet worldwide, and it is estimated that in Australia the number of users of the Internet has increasing by approximately 5% over the past twelve months. Market research organisation, Nielsen//NetRatings, has reported that in Australia, “those people who connected to the Internet in June spent an average of more than 13 hours online. This represents almost a 40% increase since June 2002, from just over 9 hours spent online” (see Figure 1). The author’s experience with schools making security incident reports via the World Wide Web shows very clearly that the more a user becomes familiar with the Internet, the easier they perceive making reports via this medium.

Figure 1 - Growth in Internet use

In essence the incident reporting system comprises a number of web pages that include forms and interactive elements; several related databases into which reports are entered and preset data is drawn; and a web data engine that facilitates the secure exchange of data between the databases and the web pages. Ancillary requirements include a web browser and Internet connection at the users end, and appropriate Internet and security infrastructure on the host side.

5 Ibid
There are many advantages to using a database driven reporting system that is accessible over the Internet. Notwithstanding the comments above, the Internet makes reporting or report data entry easy and convenient. GRiT founder, Barry Davidson, has even experimented with making reports using a wireless Internet connection to a notebook computer installed in the GRiT surveillance van. The Internet is accessible 24 hours a day, seven days per week, and can be conveniently accessed from the home, offices, or public libraries and Internet cafes. Stakeholders do not require any special software, and can use any one of the myriad web browsers available today to interact with the system.

In the case of the GRiT system, users are initially presented with a welcome page with links to a public facility for reporting graffiti or to a ‘log-in’ screen for authorised users (see Figure 2). Access to the system is protected by a traditional combination of ‘Login ID’ and Password, although the system can require additional validation criteria if appropriate.

Fitzgerald (2000, pp1-3) noted that the level of reporting of graffiti incidents is very low, except when it is experienced in educational institutions. She suggests that some public perception about graffiti being a “trivial” offence and the perception that “there is nothing the police can do” contribute to under-reporting of graffiti incidents. In the author’s experience, many people also lack knowledge about what should be reported and about the mechanism to make the report. The Internet based forms address both these issues and users become familiar with not only the process, but also the type of information that is required.

![Figure 2 - Public incident report / stakeholder login screen (GRiT incident database)](image)

Having web based forms that include semi-automated completion of predetermined fields not only makes it easier for the reportee, it greatly enhances the consistency and reliability of the data. For example, all New South Wales Schools have police issued Criminal Number Index (“CNI”) and Location Reference identifiers for reportees and the site. By drawing these identifiers from the database, the school name, address and incident location details are consistently recorded against the incident report allowing far more accurate analysis than was previously possible.
With many agencies requiring access to elements of the same data, a web-based system also improves productivity. Each user group can be assigned predetermined data access, editing and updating facilities, with any changes reflected immediately across all user groups. An important aspect of this is the system’s ability to facilitate notification of relevant matters immediately there is a change in circumstance. These notifications by email or short message service to a mobile phone can be set to occur based on one or more variables. One system is currently programmed to send an awareness email to surrounding sites when the frequency of incidents in that area reaches a predetermined level. The email includes links to sources of information relevant to protecting against the nature of the incidents being experienced.

While still under development, the GRiT system has the capacity to cross-reference report data with an offender’s database. It is proposed that all contacts made by the GRiT surveillance teams will also be recorded, creating a powerful tool that will support investigations by law enforcement bodies. It is clear that using this type of technology will facilitate enhanced analysis of data such as tags, graffiti media, surfaces, locations, offenders, crews, days of the week, times of day and other relevant data which may in turn lead to predictive incident mapping and appropriate responses.

The GRiT system was used in the lead up to the G8 summit in Calgary to identify G8 related graffiti. Data relating to this graffiti was analysed and actions taken as appropriate. Photo 1 below depicts a human figure throwing a bottle at the word ‘police’, which conveys a specific message when considered in the context of the summit. Figure 4 is a screen capture from the incident report relating to this photograph, and shows a series of thumbnail images which are embedded into the incident report. An authorised user is able to click on any of the images to see a larger photograph with relevant descriptions.

Figure 3 - Example of a Site Manager's Menu (NSW Department of Education System)
Photo 1 - Graffiti prior to the G8 summit in Calgary

Photos 2-5 below show tags that have been matched in the incident database.

Figure 4 - Thumbnail images embedded in incident report
Conclusion

The Graffiti Response and Information Team approach to graffiti management is delivering impressive results. By using a mix of community based education and graffiti removal strategies, combined with a team of highly trained volunteers actively assisting in identifying offenders and supporting law enforcement, GRiT has seen several communities become almost graffiti free.

The use of an on-line reporting and analysis system has been shown to greatly increase reporting levels while ensuring greater accuracy and reliability in report data. A system with global reach via the World Wide Web is delivering unprecedented local facilities for analysis and targeted responses to graffiti. The opportunity exists to expand this model and take advantage of the technology to reduce the costs associated with graffiti vandalism.
References


